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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,612	03/06/2002	Yoshio Aoki	020131	4974

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ARMSTRONG, WESTERMAN & HATTORI, LLP  
1725 K STREET, NW  
SUITE 1000  
WASHINGTON, DC 20006

EXAMINER

HO, TAN

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/090,612

Applicant(s)

AOKI ET AL.

Examiner

Tan Ho

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 12-16 is/are rejected.
- 7) ☒ Claim(s) 4-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Drawings***

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US Patent 5,903,239) in view of Kushihi et al (US Patent 5,635,942).

Takahashi et al disclose, in figure 2, an antenna device comprising an antenna ground plane 2a provide above a semiconductor substrate 1a, a patch electrode 4, a dielectric film disposed between the ground plane and the patch electrode. The patent to Takahashi et al differs from the claimed invention because its antenna connection 7 formed on the dielectric film instead of under the ground plane and connected to patch electrode via through-hole in the ground plane. Kushihi et al disclose, in figures 3a and

3b, a microstrip antenna comprising a patch electrode 22, a ground plane 23, a dielectric substrate 21 disposed between the ground plane and the patch electrode, and a microstrip antenna 25, not shown in the figures, mounted on a PCB 26 under the ground plane and connected to the patch electrode via through-hole 21a, see column 1, lines 27-29. Since one of ordinary skill in the art would have recognized the benefits of providing a good electrical connection between the antenna element and the transceiver formed under the ground plane, it would have been obvious to employ the antenna device of Takahashi et al with the antenna connection as taught by Kushihi et al.

***Allowable Subject Matter***

4. Claims 4-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The patents to Nalbandian et al, Wong et al, Higgins et al, and Higuchi et al are cited as of interest showing the antenna device similar to that disclosed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Ho whose telephone number is (703)308-4080. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (703)308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703)308-7722 for After Final communications.

Application/Control Number: 10/090,612

Page 4

Art Unit: 2821

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

March 9, 2003

  
TAN HO  
PRIMARY EXAMINER